No.



9600189

THE UNIVERD SHATES OF ANTERIOA

TO ALL TO WHOM THESE: PRESENTS SHALL COME:

Kaneko Seeds Co., Lid.

There has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT. VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN CLING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY TOWN ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Suzunishiki'

In Destinant Therest, I have hereunto set my hand and caused the seal of the Hant Intiety Hestection Office to be affixed at the City of Washington, D.C. this ninth day of April, in the year two thousand two.

MAAUQ teling Commissions:

Secretaria de Agricultu

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued

1. NAME OF OWNER KANEKO SEEDS CO., LTD.		2. TEMPORARY DESIGNATION C EXPERIMENTAL NAME B3	3. VARIETY NAME SUZUNISHIKI
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)	A LONG TO S	5. TELEPHONE (include area code	FOR OFFICIAL USE ONLY
50-12, Furuichi-machi, 1-chome		81-(27)-251-161	1 PVPO NUMBER 9600 /89
Maebashi City, Gunma Pref. 3718503 Jap	an.	6. FAX (include area code)	Suzunishiki
		81-(27)-290-108	6 FILING DATE
	PORATED, GIVE FINCORPORATION	9. DATE OF INCORPORATION	3/19/96
Corporation Sto	ck Company	June 1, 1947	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION NAME: Saijuro Kaneko, President	N. (First person listed will n	eceive all papers)	FILING AND EXAMINATION FEES: S 2 4 5 0. 0000 R DATE 3 / 19 / 9/
ADDRESS: KANEKO SEEDS CO., LTD.		and organization of the factor of the Cartest of the cartest of the Cartest	E DATE 5/18/96
50-12, Furuichi-machi, 1-chom		en e	CERTIFICATION FEE:
Maebashi City, Gunma Pref. 37	18503 Japan		\$350-
	<u> </u>	e de la companya della companya della companya de la companya della companya dell	DATE 10-01-01
11. TELEPHONE (Include area code) 12. FAX (Include area code) 1:	E-MAIL	14.	CROP KIND (Common Name)
81-(27)-251-1611 81-(27)-290-1086	oversea@kar	nekoseeds.co.jp	Soybean
 CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions or reverse) 		OWNER SPECIFY THAT SEED OF TH SEED? See Section 83(a) of the P	IS VARIETY BE SOLD AS A CLASS OF ant Veriety Protection Act)
a. Exhibit A. Origin and Breeding History of the Variety	☐ YE	S (If "yes", answer items 20 and 21 below)	NO (If "no," go to item 22)
b. Exhibit B. Statement of Distinctness	OWNER SPECIFY THAT SEED OF TH	IS YES NO	
c.		E LIMITED AS TO NUMBER OF CLASSES?	
d. King Exhibit D. Additional Description of the Variety (Optional)	IF YES, WHI	CH CLASSES?	☐ REGISTERED ☐ CERTIFIED
e. Kan Exhibit E. Statement of the Basis of the Owner's Ownership f. Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be depositied and maintained in an approved publication.)	LIMITED AS	OWNER SPECIFY THAT THE CLASSE TO NUMBER OF GENERATIONS?	SBE YES NO
g. Filling and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)	IF YES, SPE NUMBER 1, 1		REGISTERED CERTIFIED
<u> </u>	(If additional	explanation is necessary, please use ti	ne space indicated on the reverse.)
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THE VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S		ETY OR ANY COMPONENT OF THE RIGHT (PLANT BREEDER'S RIGHT C	VARIETY PROTECTED BY INTELLECTUAL OR PATENT)?
other countries?	☐ _{YE}	s	□ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse)	JSE REFERENCE	COUNTRY, DATE OF FILING OR ISS NUMBER. (Please use space indicate	SUANCE AND ASSIGNED and on reverse.)
24. The owners declare that a viable sample of basic seed of the variety will be furnished with applifor a tuber propagated variety a tissue culture will be deposited in a public repository and main	cation and will be replenish	ned upon request in accordance with su	ıch regulations as may be applicable, or
The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated pl and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection A			
Owner(s) is (are) informed that false representation herein can jeopardize protection and result			
SIGNATURE OF OWNER	SIGNATURE OF	OWNER	
NAME (Please print or type)	NAME (Please pr	rint or type)	
A CONTRACT OF THE CONTRACT OF	in and product pr	- Allera	
Saijuro Kaneko		•	

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner, (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initiated and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office Telephone: (301) 504-5518 FAX: (301) 504-5291

Homepage: http://www.ams.usda.gov/science/pvp.htm

ITEM

18a. Give:

- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
- (2) the details of subsequent stages of selection and multiplication;
- (3) evidence of uniformity and stability; and
- (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
 - (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- 19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 21. See Section 83 of the Act for the Contents and Term of Plant Variety Protection.
- 22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.
- 21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)
- 22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

The date of first sales: May 31, 1996, in Japan.

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

Resigtered under the seeds and seedlings law in Japan dated December 5, 1997

Registration Number: 5857

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any charles of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filling a change of address. The fee for filling a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2560 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (2-99) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (6-98) which is obsolete.

Exhibit A. Origin and Breeding History

Experimental number: <u>B3</u> Variety name: <u>SUZUNISHIKI</u>

1988 summer-autumn.

TAKANO FOODS CO.,LTD. found two types of off-type from the production field of "JIZUKA" in Ibaraki Prefecture. They were named "A" and "B" temporarily. Though "JIZUKA" did flowers of "purple". "A" and "B" had flowers of "white" color. Because "A" and "B" have rather late-mature character and larger plant length, and more pods than the average plants of "JIZUKA", they were thought as more productive. "A" and "B" were looked upon as mutants from "JISUKA". And their seeds were harvested from the plants, respectively in autumn, 1988.

Description:

Soybean "JIZUKA" is old local variety cultivated in Ibaraki prefecture. Registration of the variety is not taken part under the Seeds and Seedlings Law in Japan, and it is cultivated as materials for "Natto" in general. The main characteristics contain the small-sized seeds, late-maturing, and its purple flowers. But, some of mutational plants appear in the fields because its characteristics are rather variable. Since it is generally preferred that the size of soybean seeds is smaller as materials for Natto, "JIZUKA" yielding small seeds was cultivated widely, however, that is rarely done. In 1978, "NATTO SHORYU" was bred from the above "JIZUKA" parent material by Ibraki agricultural experiment station with the use of pure line selection method. "NATTO SHORYU" inherits the characteristics of "JIZUKA" concerning the flower color, flowering period, seed size and color and hilum color, etc. But no mutational plant appeared in the field and the characteristics of "NATTO SHORYU" is stable.

Today, "NATTO SHORYU" is widely cultivated in exchange of "JIZUKA". And also registration of this is not taken part under the Seeds and Seedlings Law in Japan.

1988-1992

The above "A" and "B" are hold in the cold-stockroom of TAKANO FOODS CO., LTD as genetic resources.

1992 spring-summer

KANEKO SEEDS CO., LTD. took the above "A" and "B" over from TAKANO FOODS

CO., LTD. and started to culture and breed. "A" and "B" were S1 generation at that time because they already had been selected one time.

And each 52 plants were cultivated in the field of Kunisada breeding station owned by KANEKO SEEDS CO., LTD.. Some of "A" and "B" were selected in the field by the following standard. Since 8 plants of "B" cleared its basis, they were selected after being investigated their yields, etc, and named as "B1" to "B8", respectively.

The basis of selection:

Falling less easily than the "NATTO SHORYU". Not growing in vine shape.

Strong to Stem plague.

Bearing the pods more abundantly.

Small and uniform seeds.

Yielding seeds more abundantly.

1993 spring-summer

Each 52 plants of "B1", "B2" and "B3" that had yielded more abundantly in S2 generation, "B1" to "B8", were cultivated. Thereafter, the selection was on the basis of the cultivation in 1992. As a result, each 30 plants of "B2" and "B3" were selected in the field. Usually, the character of mutant in Soybean is known as being fixed easily. Off-type having different character in flower color etc. were not observed in "B2" and "B3", respectively.

1993 winter

As a result of making Natto from "B2" and "B3", it was considered "B3" as the more appropriate materials for making Natto.

1994 summer

104 plants of S3 generation from "B3" were cultivated. The mutational plants having characters in flower color etc. were not observed. 4 off-type having larger plant length and tending to fall easily were removed in the field. The seeds were harvested from the other 100 plants.

1994 winter

As a result of the quality test for the material of Natto regarding "B3", it was

recomfirmed as appropriate.

1995 summer

Seed multiplication of "B3" was done. 130 plants of S4 generation of "B3" were cultivated. The mutational plants having the different character in flower color etc. were not observed in the field. 3 off-type having larger plant length and tending to fall easily were removed in the field. The seeds were harvested from the other 127 plants and named as "SUZUNISHIKI".

Attested stability

In 1994, 104 plants were cultivated, and a mutational plant having a different character in flower color etc. were not observed in the field. In 1995, 130 plants were cultivated, and a mutational plant having a different character in flower color etc. were not observed in the field.

In the observation of the field in two years, a mutational plant regarding qualitative character was not observed, and the characters are stable genetically.

Off-type plants that are large plant length and tend to fall easily emerged by a ratio of 4/104, that is 3.8%, among the off-type having the same as its qualitative characters in the field in 1994. And in 1995, they emerged by a ratio of 3/103, that is 2.3%. these emergence rate is within the maximum permissible level of commercial varieties.

Kinds of variants

In the cultivation period between 1993 to 1995, no variants were observed regarding the qualitative characters. And plants that are large plant length and tend to fall easily have possibilities to emerge by a ratio of 2 to 4% at their cultivation. In 2000, the plants of this type emerged by a ratio of 100/15000, that is 0.67% in Japan.

SUZUNISHIKI

Exhibit B Statement of Distinctness

'Variety SUZUNISHIKI' is most similar to 'Variety NATTO-SYORYU'; however 'Variety SUZUNISHIKI' has a white flower color, whereas 'variety NATTO-SYORYU' has a purple frower color.

'Variety SUZUNISHIKI' is most similar to 'Variety NATTO-SYORYU'; however Variety SUZUNISHIKI' has a green hypocotyl color, whereas 'variety NATTO-SYOIRYU' has a purple.

UNITED STATES DEPARTMENT OF AGRICULTURE, AGRICULTURAL MARKETING SERVICE, SCIENCE DIVISION
PLANT VARIETY PROTECTION OFFICE
10301 BALTIMORE BLVD., RM. 500, NATIONAL AGRICULTURAL LIBRARY BUILDING
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF SOYBEAN VARIETY (PVP APPLICATION EXHIBIT "C")

Glycine max (L.)Merr.

	cine max (L.)Merr			
Name of Applicant:	Name of Applicant: Variety Name: SUZUNISHIKI			
KANEKO SEEDS CO., LTD. Experimental Name (if applicable): (very important if one has ever been used): B3				
Address (Street and No., City, State, Zi	p Code):	PLEASE DO NOT WE	RITE IN THIS SPACE	
50-12, Furuichi-machi 1 Chome Maebashi City Gunma Pref. 371 Jap	pan P	FOR PVP OFF	ICE USE ONLY	
For each characteristic, please place th your variety in the corresponding box what you believe to be the most accurate	1.TXX/OHX/fee/schhash	haracter stata th est choice is not	at best represents listed, write in	
SHAPE spherical: (L/W, spherical: L/T , and T/W flat ratios = < 1.2)	[SPHF] nerical- nttened:(L/W .io > 1.2; L/T .io < 1.2	elongate:(L/T	4=[ELFL] elongate- flattened:(L/T ratio > 1.2; T/W > 1.2)	
2. [SCL]:SEED COAT COLOR:				
1=[YEL]yellow 2=[GRN]green 3= 5=[OTH]other (please specify)	[BRN] brown 4=[BLK] black		
3. [LU]:SEED COAT LUSTER	,			
1=[DL] dull 2=[SH] shiny	•			
4. [SSZ]:SEED SIZE: 0 9 grams/100 s	seeds			
5. [HCL]:HILUM COLOR:				
1=[BUF] buff 2=[YEL] yellow 3=[BF 6=[BLA] black 7=[OTH] Other (please	RN]brown 4=[GRY] specify)]gray 5=[IBL]imp	perfect black	
6. [CCL]:COTYLEDON.COLOR				
1=[YEL]yellow 2=[GRN]green				
7. [PA]:SEED PROTEIN PEROXIDASE ACTIVITY	,			
2 1=[LO]low 2=[HI]high				
8. [P]:SEED PROTEIN ELECTROPHORETIC BAND				
1= [A] Type A 2= [B] Type B				
COLOR ('Evans'; brocot ('Davis')	onze band below tyledons Woodworth';	3={LPR}light purple below cotyledons ('Beeson'; Pickett 71')	4=[DPR]dark purple extending to unifoliolate leaves (Hodgson'; 'Coker Hampton 266A')	
10. [SP]:LEAFLET SHAPE				
3 1=[LN]lanceolate 2=[OL]oval 3=[OV]ovate 4=[OTH]other (specify) e.g., [CB]=oblong [EP]=elliptical				

11. [FCL]:FLOWER COLOR			,	
	1=[WHI]white	2=[PUR]purple	3=[WPT] white	w/purple throat	
12. [PCL):POD COLOR	ध- वर्ष			
	1=[TAN]tan	2=[BRN]brown	3=[BLA]black		
13. [PBC]:PLANT PUBESCEN	CE COLOR		i i	1
	1=[GRY]gray	2=[BRN]brown	3=[TWN]tawny	4=[LTN]light	awny
14. [PHB]:PLANT HABIT				
	=[DET]determinate (=[IND]indeterminate			2=[SDT]:semi-determin 4=[INT]:intermediate	nate ('Will')
15. [1	MAT]:MATURITY GROUP				
9 1	=000 2=00 3=0 4=	I 5=II 6=III 7=1	IV 8=V 9=VI	10=VII 11=VIII 12=	IX 13=X
16. [1 5	MATS]:MATURITY SUBG	ROUP (early)	1 2 3 4 5	6 7 8 9 (late)	
17. DIS	SEASE REACTION (Er	ter 0=not tested;		2=resistant; 3=toler	ant)
[BCI	PS]:Bacterial Pustu	le (Xanthomonas car	mpestris pv. g	lycines (Nakano) Dye)	
			;	inea (Coerper) Young,	Dye, & Wilkie)
[WDI	FR]:Wildfire Blight	(Pseudomonas syrii	ngae pv. tabac	i (Wolf & Foster) You	ng, Dye, & Wilkie
		FUNGA	L DISEA	SES	
[BRS	SP]:Brown Spot <i>(Sep</i>	toria glycines)		••	
لكا	[Y]:Frogeye Leafspo	•	1a)	γ.	
	1721	other (please spec	cify	race4 [FG05] race5	[FG06]race6
O [TRS	SP]:Target Spot (Co	rynespora cąssiicol	la)		. •
O [DYN	ML]:Downey Mildew (Peronospora trifoli	iorum var. man	churica)	
O [PWI	ML]:Powdery Mildew	(Microsphaera diffu	ısa)	* - 4	•
O [BRS	SR]:Brown Stem Rot	(Cephalosporium gre	egatum)		
OESTO	CR]:Stem Canker (Di	aporthe phaseolorum	m var. caulivo	ra)	i i
O [PSE	BL]:Pod and Stem Bl	ight (Diaporthe pha	aseolorum var.	sojae)	
O [PRS	ST]:Purple Seed Sta	in (Cercospora kikı	uchii) .		

Glycine max (L.) Merr. (page 2 of 4)

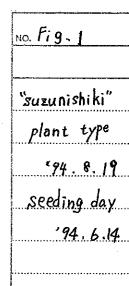
(Enter Omnot tested: 1 susceptible: 2 resistant; 3 stolerant) O [RZRT]: Rhizoctonia Root Rot (Rhizoctonia solani) [PYPH]: Phytophthora Root Rot (Phytophthora megasperma Drechs. f. sp. glycinea) o [PY01]:race 1 O [PY02]:race 2 O [PY03]:race 3 [PY04]:race 4 O [PY06]:race 6 [PY07]:race 7 O [PY08]:race 8 O [PY09]:race 9 O [PY10]:race 10 [PY11]:race 11 | O [PY12:]race 12 | O [PY13]:race 13 | O [PY14]:race 14 | O [PY15]:race 15 O [PY16]:race 16 O [PY17]:race 17 O [PY18]:race 18 O [PY19]:race 19 O [PY20]:race 20 O [PY21]:race 21 O [PY22]:race 22 O [PY23]:race 23 O [PY24]:race 24 O [PY25]:race 25 O[PY26]:race 26 O[OTHD]:other (please specify) VIRAL DISEASES [BDBL]:Bud Blight (Tobacco Ringspot Virus) [BYMO]: Yellow Mosaic (Bean Yellow Mosaic Virus) [CWCV]:Cowpea Mosaic (Cowpea Chlorotic Virus) [PDML]:Pod Mottle (Bean Pod Mottle Virus) O [SDMT]:Seed Mottle (Soybean Mosaic Virus) NEMATODES [SYCY]: Soybean Cyst Nematode (Heterodera glycines) O[SY01]:race 1 O[SY02]:race 2 O[SY03]:race 3 [SY05]:race 5 O[SY06]:race 6 O[SY09]:race 9 O[SY14]:race 14 (formerly race 4) O [SY00]:other race (specify) O [LANC]: Lance Nematode (Hoplolaimus columbus) O [RTKN]:Southern Root Knot Nematode (Meloidogyne incognita) O [NTKN]: Northern Root Knot Nematodė (Meloidogyne hapla) O [PTKN]: Peanut Root Knot Nematode (Meloidogyne arenaria) O [RENM]: Reniform Nematode (Rotylenchus reniformus) O[OTHD]:other (specify

"C": Glycine max (L.) Merr. (page 3 of 4)

SUIBEAN

EXHIBIT

SOYBEAN EXHIBIT "C": Glycine max (L.) Merr. (page 4 of 4)
20. PHYSIOLOGICAL RESPONSES: (Enter 0=not tested) 1=susceptible; 2=resistant; 3=tolerant)
O [CHLO]: Iron Chlorosis on Calcareous Soil
O other (please specify)
INSECT S 21. INSECT REACTIONS: (Enter 0*not tested; 1=susceptible; 2=resistant; 3=tolerant)
[MXBB]:Mexican Bean Beetle (Epilachna varivestis)
[POTH]:Potato Leaf Hopper (Empoasca abae)
O [OTHI]: other (please specify)
II P. P. P. T. G.T. C. P. G.
HERBICIDES 22. HERBICIDE RESISTANCE: (Enter 0 mot tested; lasusceptible; 2 mesistant; 3 mot derant)
O [MEZN]:Metribuzin
[SULF]:Sulfonylurea
[RNDP]:Roundup
OTHH]:other (please specify)
ADDITIONAL INFORMATION
Please add any additional information characteristic of your variety that you feel is pertinent. This information may be continued on additional pages and/or in the exhibit D.



NO. Fig. 2

"kosuzu" plant type

'94. 8.19 Seeding day '94. 6.14

NO. Fig. 3

"Harts 507" plant type

94.8.19

seeding day







Fig. 4

"Harts 922" plant type

94.8.19

seeding day

194.6.14



 \bigcirc

Fig. 5

"Suzunishiki" leaflet '95.8.24 Seeding day '95.6.12

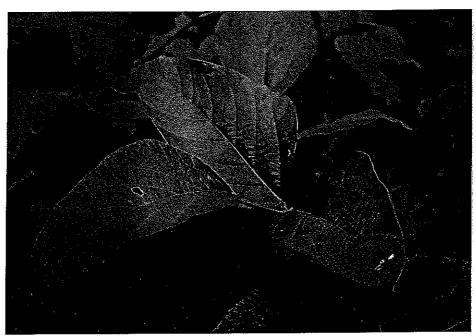


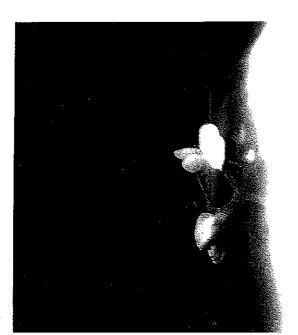
Fig. 6

"suzunishiki" flower

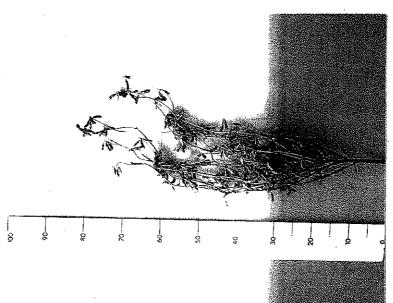
95.8.24

seeding day

195.6.12







NO. Fig. 7

5 i f

"Suzunishiki" plant type

95.8.31

memo. in this fig.
seeding day 6/12
flowring day 8/5

photographing day %

NO. Fig. 8

"Suzunishiki" is low sensibility

to Phytophthor

Rot (the right side

seeding day

'94.6.14

NO. Fig. 9

"suzunishiki" plant type

(maturing time)

95.11.10

seeding day

95.6.12

Fig.10

"Jizuka" plant type (maturing time)

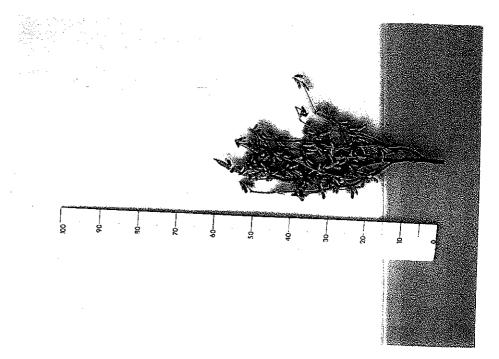


Fig. 11

Natto syoryu"

plant type

(maturing time)

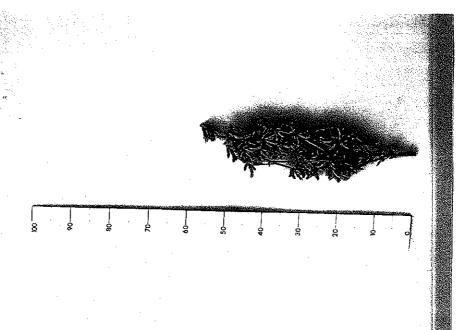
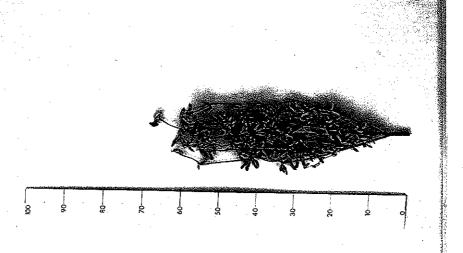
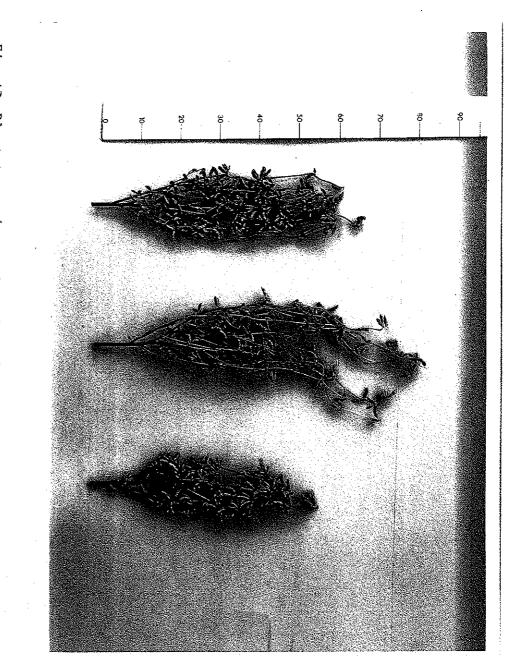


Fig. 12

"kosuzu" plant type (maturing time)





Plant type. (maturing time. From left to right KOSUZU, SUZUNISHIKI (B3), and NATTO SYORYU,)

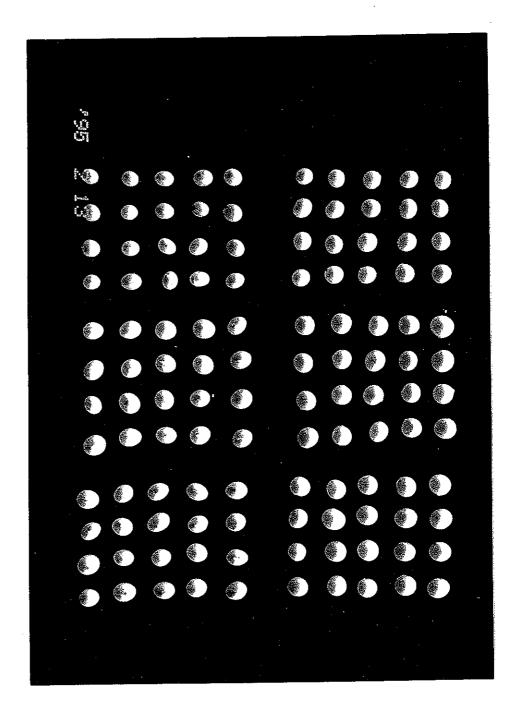


Fig. 14 Seed shape. (from left to right SUZUNISHIKI(B3), KOSUZU and NATTO SYORYU.)

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	SYORYU	
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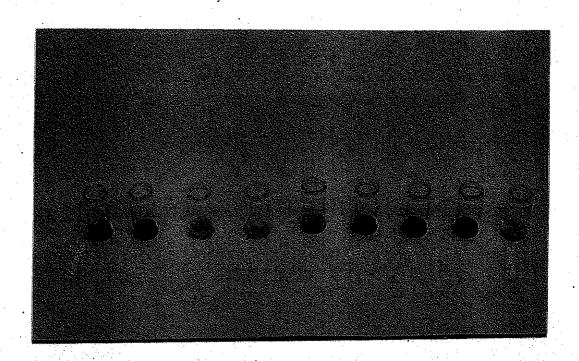


Fig.// A drop of 0.1% hydrogen peroxide was added and color was recorded after 20 sec. (from left to right Harosoy, Suzunishiki (B3), KB4, Akibiyori (KB5), Harts507, Harts605, Harts608, Harts922 and Chippewa.) We used seeds 3 months old.

3 U

Seed protein peroxidase activity.

Methods of seed protein peroxidase activity referred to report of B. R. Buttery and R. I. Buzzell. (Crop Science 8:722-726, 1968)

B.R. Buttery and R. I. Buzzell. 1968. Peroxidase acitivity in seeds of soybean varieties. Crop Science 8:722-726.

EXPERIMENTAL PROCEDURE

A spot test for peroxidase activity was developed in which the seed coat of individual seeds was soaked in 10 drops of 0.5% guaiacol solution for 10 min, a drop of 0.1% hydrogen peroxide was added, and the presence or absence of color was recorded after 20 to 40 sec. The high activity varieties produced an intense reddish-brown color, while during the same time interval, the low activity types showed virtually no color reaction. For every variety listed, at least five seeds were tested. In a few cases a larger number were examined. Since peroxidase activity in the seed coat of single seeds decreases with age (unpublished results), we used seeds which were from 3 to 15 months old.

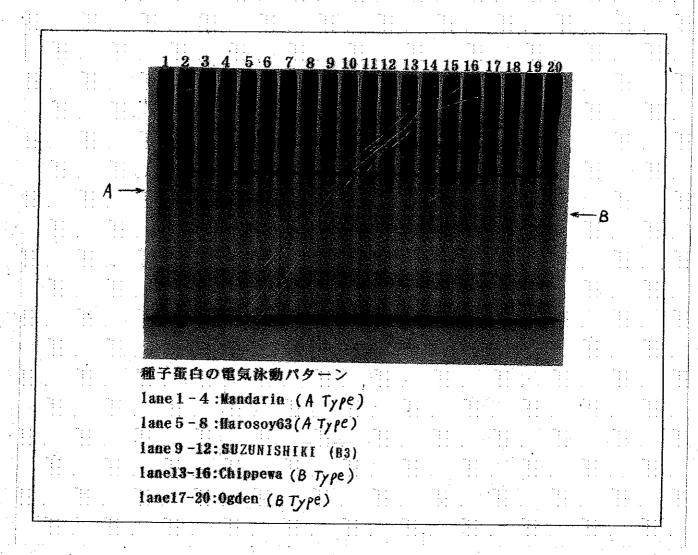


Fig./7 Banding patterns of seed protein from 5 soybean varieties.

2413

Seed protein electrophoreric band.

Methods of Seed protein electrophoreric band referred to report of Arnold L. Larsen. (Crop Science 7:311-313, 1967)

Arnold L. Larsen. 1967. Electrophoretic difference in seed protein among varieties of soybean, Glycine max (L.) Merrill.

Crop Science 7:311-313

MATERIALS AND METHODS

Seed samples of 64 soybean varieties representing diverse locations and several years, were collected from the entire soybean-production area of the United States and Canada.

A 5-g seed sample of each variety was ground finely in a small grinder-mixer and then mixed with 20 ml of 0.1 n acetate buffer' (pH4.8). After an overnight extraction at 4 C, the gruel was centrifuged at 30,000 ×g and 0 C for 30 minutes, the pellet discarded and the supernatant adjusted to pH 8.0 with 0.1 n KOH. The solution was refrigerated for 1 hour and then centrifuged at 15,000 ×g and 0 C for 15 minutes. The final supernatant was a light-yellow, clear solution containing approximately 10 to 13 ing protein per ml.

^{*}The extractant was an equal mixture of 0.1 x soduim acetate and 0.1 x acetic acid.



8 農産第 1 1 9 8 号 平成 8 年 2 月 2 9 日

カネコ種苗株式会社 代表取締役社長 金子才十郎 殿

農林水産省農産園芸局



出願品種の証明について

平成8年2月26日付け文書をもって申請のあったこのことについて、別添のとおり出願証明書(英文)を送付する。

Ministry of Agriculture, Forestry and Fisheries Japanese Government

February 29, 1996

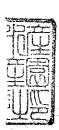
To whom it may concern;

I hereby certify that the attached is a true copy of the application for plant variety protection which the Japanese authority has received concerning the Soybean variety "Suzunishiki". Some relevant items in that application are reproduced below;

1) name and address of applicant:	Kaneko Seeds Co., Ltd.
	50-2, Furuichimachi 1-chome, Maebashi-shi
	Gunma, JAPAN
2) species to which the plant variety	halonge •
2) species to which the plant variety	-
	Glycine max (L.) Merrill
3) proposed denomination:	Suzunishiki
-, FF	
	D.1 00 1005
4) date of application:	February 20, 1995
5) applications outside Japan preceding	ng the date of this application:
	None
6) application number :	7597
6) application number:	7597

S. Kuromoto

Shigemasa Kuromoto
Director
Seeds and Seedlings Division
Agricultural Production Bureau
Ministry of Agriculture, Forestry and Fisheries
1-2-1 Kasumigaseki, Chiyoda-ku
Tokyo, JAPAN



U.S. DEPARTMENT OF AGRICULTURE		a accordance with the Privacy Act o	
AGRICULTURAL MARKETING SERVICE	The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.		
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order to de certificate is to be issued (7 U.S.C. 2 until certificate is issued (7 U.S.C. 2426	421). Information is held confidential	
1. NAME OF APPLICANT(S)	TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME	
KANEKO SEEDS CO., LTD	B3 COMPANY OF THE COM		
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (include area code)	6. FAX (include area code)	
50-12, Furuichi-machi 1-chome	81-(27)-251-1611	81-(27)-290-1086	
Maebashi City, Gunma Pref. 3718503	7. PVPO NUMBER	<u> </u>	
Japan		•	
8. Does the applicant own all rights to the variety? Mark an "X" in appropri	riate block. If no, please explain.	X YES NO	
	•	innuma)	
 Is the applicant (individual or company) a U.S. national or U.S. based c If no, give name of country Japan 	ompany?	YES NO	
10. Is the applicant the original owner? YES	() If no, please answer one of the fo	ollowing:	
a. If original rights to variety were owned by individual(s), is (are) the or	riginal owner(s) a U.S. national(s)?		
TYES T	NO If no, give name of country	•	
b. If original rights to variety were owned by a company(ies), is(are) the	e original owner(s) a U.S. based company	17	
TYES I	(O if no, give name of country		
11. Additional explanation on ownership (if needed, use reverse for extra s, This variety was registered by KANEKO Si Seedling Law dated December 5, 1997.	•	under the Seeds and	
PLEASE NOTE:		····	
Plant variety protection can be afforded only to owners (not licensees) who meet of	ne of the following criteria:	X	
 If the rights to the variety are owned by the original breeder, that person must be which affords similar protection to nationals of the U.S. for the same genus and 	e a U.S. national, national of a UPOV memb species.	er country, or national of a country	
If the rights to the variety are owned by the company which employed the origin member country, or owned by nationals of a country which affords similar prote	nal breeder(s), the company must be U.S. barection to nationals of the U.S. for the same g	sed, owned by nationals of a UPOV enus and species.	
3. If the applicant is an owner who is not the original owner, both the original own	er and the applicant must meet one of the ab	nove criteria	

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

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11. Additional explanation on ownership (CONTINUED FROM FRONT)

This variety have been bred by KANEKO SEEDS's breeder on his duties.

KANEKO's employee including breeder agree that all the rights for

the varieties bred on his duty and the rights comes from its

registration must belong to KANEKO SEEDS CO., LTD..

Therefore, rights of application and ownership will be hold

the KANEKO SEEDS CO., LTD..

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